

SELF-ORGANIZING OVERLAY NETWORKS

ABSTRACT

In an unstructured overlay network, each node in the network periodically tests logical network links among neighboring nodes to determine whether the links should be reorganized. A Metropolis scheme is used to determine the probability with which the links are reorganized. This probability is computed based on the change in link costs and/or node degrees that would be effected by a proposed reorganization. The Metropolis scheme tends to maintain a consistency among the degrees of the nodes, thereby providing strong failure resilience.